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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,573	12/28/2001	Shantanu Sarkar	062891.0611	3808

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EXAMINER	
DYKE, KERRI M	

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/035,573	SARKAR ET AL.	
	Examiner	Art Unit	
	Kerri M. Dyke	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/08/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-5, 10-13, 18-19, 21-23, 28-31, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. (US 6,577,648).

3. In regards to claims 1 and 19, Raisanen et al. discloses a method and system for providing an audio stream in a voice over Internet Protocol (VoIP) environment, comprising: determining a quality value for each of a plurality of audio streams communicated in a VOIP format. Column 3 lines 30-34 disclose measuring the quality of each of a plurality of streams in a VoIP. Column 1 lines 27-28 disclose that VoIP is an effective means of transporting audio signals. Raisanen does not disclose choosing a stream based upon its quality value, but doing so would have been obvious to one of ordinary skill in the art because some applications are intolerant of low quality-of-service streams, as disclosed in column 1 lines 31-33. Raisanen also does not disclose playing a stream to a call on hold, but that clause has been given no patentable weight because it is simply a statement of intended use and the remainder of the claims does not depend on it for completeness. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

4. In regards to claims 3 and 21, Raisanen et al. discloses the method and system of claims 1 and 19 wherein the quality value for an audio stream comprises at least one of packet jitter and

packet loss for the audio stream. Both packet loss and jitter are measured, as disclosed in column 2 lines 49-53.

5. In regards to claims 4 and 22, Raisanen et al. discloses the method and system of claims 1 and 19, but not further comprising selecting the audio stream comprising a highest quality value. Raisanen does not disclose choosing a stream with the highest quality value, but doing so would have been obvious to one of ordinary skill in the art because some applications are intolerant of low quality-of-service streams, as disclosed in column 1 lines 31-33.

6. In regards to claims 5 and 23, Raisanen et al. discloses the method and system of claims 1 and 19, wherein the quality value for an audio stream comprises a current value for the audio stream determined based on real-time performance of the audio stream at a point at least proximate to a device playing the selected audio stream to the call on hold. The procedure for measuring the real-time quality-of-services is disclosed in column 5 line 1 – column 11 line 33. One set of measuring hosts is located proximate to the device.

7. In regards to claims 10 and 28, Raisanen et al. discloses the method and system of claims 1 and 19 wherein determining the value for each of the plurality of audio streams quality comprises: receiving the plurality of audio streams; and monitoring each of the quality streams based on at least one of: packet jitter and packet loss of the audio stream. The procedure for measuring the real-time quality-of-services is disclosed in column 5 line 1 – column 11 line 33. Both packet loss and jitter are measured, as disclosed in column 2 lines 49-53.

8. In regards to claims 11 and 29, Raisanen et al. discloses the method and system of claims 1 and 19, further comprising communicating at least an identifier of the audio stream selected for playing to the call on hold to an endpoint handling the call on hold. The endpoints are disclosed

as edge routers or proxy servers in column 11 line 3. Each packet must be equipped with a header identifying its final destination in order for the endpoint to correctly route the packet. Therefore the selected stream must be identified to the endpoint handling the call on hold.

9. In regards to claims 12 and 30, Raisanen et al. discloses the method and system of claims 1 and 19 wherein determining the quality value for each of the audio streams comprises receiving the quality values for the audio streams from an upstream device an Internet Protocol network. The procedure for measuring the real-time quality-of-services is disclosed in column 5 line 1 – column 11 line 33. Column 11 lines 1-3 disclose the device can be an edge, or upstream, device.

10. In regards to claims 13 and 31, Raisanen et al. discloses the method and system of claims 12 and 30, wherein the upstream device comprises an edge router of the Internet Protocol network. Column 11 lines 1-3 discloses the devices can be edge routers.

11. In regards to claims 18 and 36, Raisanen et al. discloses the method and system of claims 1 and 19, further comprising: identifying a poor quality audio stream based on the quality value for the audio stream; and communicating an identifier of the poor quality stream to an upstream router for discard of the poor quality audio stream. Column 3 lines 30-34 disclose measuring the quality of each of a plurality of streams in a VoIP. Choosing a stream based upon its quality value and discarding of it if it is poor quality would have been obvious to one of ordinary skill in the art because some applications are intolerant of low quality-of-service streams, as disclosed in column 1 lines 31-33. The upstream elements are contained within the network elements box, 303, of figure 3.

12. Claims 2, 7, 20, 25, 37-41, 44, 46-49, and 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. (US 6,577,648) in view of Shaffer et al. (US 6,526,041), which was supplied by the applicant.

13. In regards to claims 2 and 20, Raisanen et al. discloses the method of Claim 1, wherein the audio stream comprises a music-on-hold channel, but not from a music-on-hold Server. The audio stream of Raisanen et al. are inherently capable of carrying music and thus could be called music-on-hold channels.

Shaffer discloses a music-on-hold server in figure 5 elements 50 and 96.

It would have been obvious to one of ordinary skill in the art to use a music-on-hold server in accordance with the invention of Shaffer et al. to transmit music-on-hold audio streams taught by Raisanen et al. because Shaffer et al.'s method conserves bandwidth, as disclosed in column 1 lines 55-61.

14. In regards to claims 7 and 25, Raisanen et al. discloses the method and system of claims 1 and 19, but not further comprising determining the quality value for each audio stream based on a sliding window of quality metrics for the audio stream.

Shaffer et al. discloses the calculations are dynamic, i.e. continual on a sliding window basis, in column 5 lines 1-2.

It would have been obvious to one of ordinary skill in the art to calculate quality-of-service as taught by Raisanen et al. using a sliding window as taught by Shaffer et al. because many of the values used for the calculations are dynamic, as taught by Shaffer et al. in column 5 line 1.

15. Claims 37-41, 44, 46-49, and 54 are the same as claims 19-23, 25, 28-31, and 36 with the exception of including logic encoded in media. Raisanen et al. disclose claims 19-23, 25, 28-31, and 36 in the above rejections. Raisanen et al. does not disclose logic encoded in media.

Shaffer et al. discloses logic encoded in media in the form of a memory or mass storage device in column 3 lines 38-39.

It would have been obvious to one of ordinary skill in the art to use the logic encoded in media taught by Shaffer et al. in the music-on-hold system of Raisanen et al. because encoding the system into media makes it easier to install in many different devices, as shown in figure 6 of Shaffer et al.

16. In regards to claim 55, Raisanen et al. discloses a method for providing music-on-hold at an endpoint of an Internet Protocol network, comprising: receiving a plurality of music-on-hold streams; determining a real-time quality value for each of the audio streams based on at least one of packet jitter and packet loss for the music-on-hold stream; selecting one of the music-on-hold streams as a high quality stream based on the real-time quality values for the music-on-hold streams; and playing the high quality stream to the call on hold. Column 3 lines 30-34 disclose measuring the quality of each of a plurality of streams in a VoIP. Column 1 lines 27-28 disclose that VoIP is an effective means of transporting audio signals. Raisanen does not disclose choosing a stream based upon its quality value, but doing so would have been obvious to one of ordinary skill in the art because some applications are intolerant of low quality-of-service streams, as disclosed in column 1 lines 31-33. Both packet loss and jitter are measured, as disclosed in column 2 lines 49-53. The audio stream of Raisanen et al. are inherently capable of carrying music and thus could be called music-on-hold channels. Raisanen et al. does not

disclose determining the quality values repetitively or playing a stream in response to a call being placed on hold.

The entire Shaffer et al. patent is directed to a system for playing music in response to a call being placed on hold. Shaffer et al. discloses dynamic, i.e. continual on a sliding window basis, calculations in column 5 lines 1-2.

It would have been obvious to one of ordinary skill in the art to calculate quality-of-service as taught by Raisanen et al. using a sliding window as taught by Shaffer et al. because many of the values used for the calculations are dynamic, as taught by Shaffer et al. in column 5 line 1.

17. Claims 6, 9, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. (US 6,577,648) in view of Laursen et al. (US 6,947,417).

18. In regards to claims 6 and 24, Raisanen et al. discloses the method and system of claims 1 and 19, wherein the audio stream selected for playing to the call on hold comprises a first audio stream, but not further comprising, in response least degradation first audio stream below threshold, selecting for playing to the call on hold second audio stream based on a then current quality value for each of the remaining the audio streams.

Laursen et al. discloses choosing a stream with the highest threshold. If a new stream later has the highest threshold either in response to degradation of the first stream or because it is a new stream, transmission of the first stream is discontinued and replaced with the second stream.

It would have been obvious to one of ordinary skill in the art to monitor the audio streams of Raisanen et al. to ensure the one with the highest value is always playing, as taught by Laursen et al. because the one with the highest value will provide the best quality-of-service.

19. In regards to claims 8 and 26, Raisanen et al and Laursen et al. disclose the method and system of claims 6 and 24, further comprising switching from the first audio stream to the second audio stream at an endpoint playing the audio streams to the call on hold. Raisanen et al. discloses in column 11 lines 1-3 that the streams travel through the endpoints, so it would have been obvious to one of ordinary skill in the art to switch between two streams at an endpoint.

20. In regards to claims 9 and 27, Raisanen et al. discloses the method and system of claims 1 and 19, but not further comprising presenting to users for selection only audio streams with a quality value above CR threshold.

Laursen et al. discloses a method of changing the threshold in accordance with the priority level in column 19 lines 20-44. In this way only the stream with the highest priority and threshold is presented for transmission.

It would have been obvious to one of ordinary skill in the art to only use the audio streams of Raisanen et al. that are above a certain threshold as taught by Laursen et al. because some end devices are intolerant of low quality-of-service, as taught by Raisanen et al. in column 1 lines 31-33.

21. Claims 14, 32, 42, 43, 45, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. (US 6,577,648) in view of Shaffer et al. (US 6,526,041) in further view of Laursen et al. (US 6,947,417).

22. In regards to claims 14 and 32, Raisanen et al. discloses the method and system of claims 1 and 19, but not further comprising selecting a locally stored audio file for playing to the call on hold in response to at least the quality values for the audio streams being below a threshold value.

Shaffer et al. discloses playing a local audio file in column 2 lines 49-55.

It would have been obvious to one of ordinary skill in the art to play the file locally as taught by Shaffer, because doing so may alleviate network backup, as disclosed by Shaffer in column 2 lines 49-55.

Laursen et al. discloses choosing a stream based up the threshold.

It would have been obvious to one of ordinary skill in the art to monitor the audio streams of Raisanen et al. and play a local music file as taught by Shaffer et al if none of the streams were above the threshold as taught by Laursen et al. The motivation for doing so is given by Raisanen et al. in column 1 lines 31-33 where it is disclosed that some end devices are intolerant of low quality-of-service and by Shaffer et al. in column 2 lines 49-55 where it is disclosed that playing a file locally can preserve network resources.

23. Claims 42, 45, and 50 are the same as claims 24, 27, and 32 with the exception of including logic encoded in media. Raisanen et al., Shaffer et al. and Laursen et al. disclose claims 24, 27, and 32 in the above rejections. Raisanen et al. does not disclose logic encoded in media.

Shaffer et al. discloses logic encoded in media in the form of a memory or mass storage device in column 3 lines 38-39.

It would have been obvious to one of ordinary skill in the art to use the logic encoded in media taught by Shaffer et al. in the music-on-hold system of Raisanen et al. because encoding the system into media makes it easier to install in many different devices, as shown in figure 6 of Shaffer et al.

24. Claims 15-16 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. (US 6,577,648) in view of Cerf et al. (US 6,418,138).

25. In regards to claims 15 and 33, Raisanen et al. discloses the method and system of claims 1 and 19, but not further comprising receiving list of audio streams, the plurality of audio streams including least one of audio streams identified by the list.

Cerf et al. discloses supplying a list of streams in column 4 lines 28-40.

It would have been obvious to one of ordinary skill in the art to provide a list, as taught by Cerf et al., of the available flows, as determined by the method/system of Raisanen et al. because presenting a list allows for further information to be obtained and then a channel selected as taught by Cerf et al. in column 4 lines 28-40.

26. In regards to claims 16 and 34, Raisanen et al and Cerf et al. disclose the method and system of claims 15 and 33, wherein the list is generated by a call manager. Cerf et al. discloses a server that is used to collect and assemble the list in column 4 lines 28-40. A call manager is inherently a server.

27. In regards to claims 17 and 35, Raisanen et al. discloses the method and system of claims 1 and 19, but not further comprising generating a list of locally used audio streams, the plurality of audio streams including at least one of the locally used audio streams.

Cerf et al. discloses supplying a list of streams in column 4 lines 28-40.

It would have been obvious to one of ordinary skill in the art to provide a list, as taught by Cerf et al., of the available flows, as determined by the method/system of Raisanen et al. because presenting a list allows for further information to be obtained and then a channel selected as taught by Cerf et al. in column 4 lines 28-40.

28. Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. (US 6,577,648) in view of Cerf et al. (US 6,418,138) in further view of Shaffer et al. (US 6,526,041).

29. Claims 51-53 are the same as claims 33-35 with the exception of including logic encoded in media. Raisanen et al., and Cerf et al. disclose claims 33-34 in the above rejections. Raisanen et al. does not disclose logic encoded in media.

Shaffer et al. discloses logic encoded in media in the form of a memory or mass storage device in column 3 lines 38-39.

It would have been obvious to one of ordinary skill in the art to use the logic encoded in media taught by Shaffer et al. in the music-on-hold system of Raisanen et al. because encoding the system into media makes it easier to install in many different devices, as shown in figure 6 of Shaffer et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Dyke whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Friday, 8:10 am - 4:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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10/11/05